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(54) Title: METHOD AND DEVICE FOR BUILDING A VARIABLE-LENGTH ERROR-CORRECTING CODE

(57) Abstract: The invention relates to the construction of variable-length error-correcting (VLEC) code, using the main steps of: defining all the needed parameters, generating a code having a fixed length L1, storing in a set W thus obtained all the possible L1-tuples distant of the minimum diverging distance d_{min}! from the codewords (one extra-bit being affixed at the end of all words if the new set W thus obtained is not empty), deleting all words of W that do not satisfy a distance criterion with all codewords, and verifying that all words of the final set W satisfy another distance criterion. When the codeword deletion is done not anymore only in the last obtained group of the code, but in the group of a given length value L_s to which the algorithm will skip back to in the codeword deletion operation, the beginning of the best VLEC structure of each L_s is, according to the invention, kept in memory and re-used within the next search.

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